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Vol. I.

No. 10.

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NEW ORLEANS, LA.

PHONOGRAM

A MONTHLY MAGAZINE

DEVOTED TO

THE SCIENCE OF SOUND . .

AND

.. RECORDING OF SPEECH.

PUBLISHED BY

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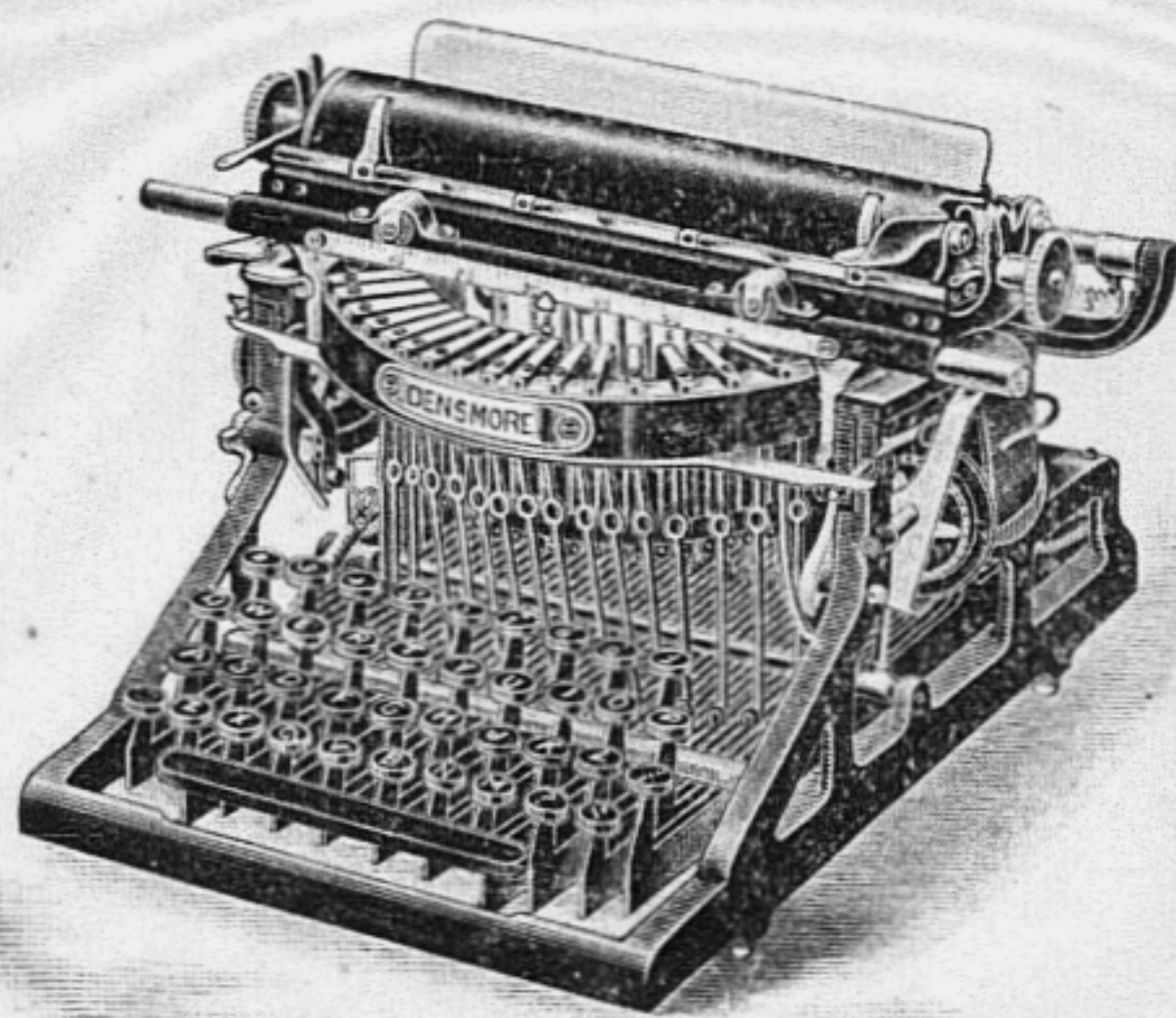
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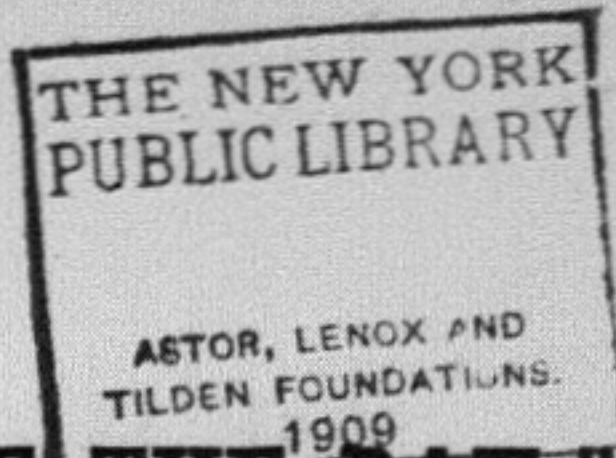
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THE PHONOGRAM.

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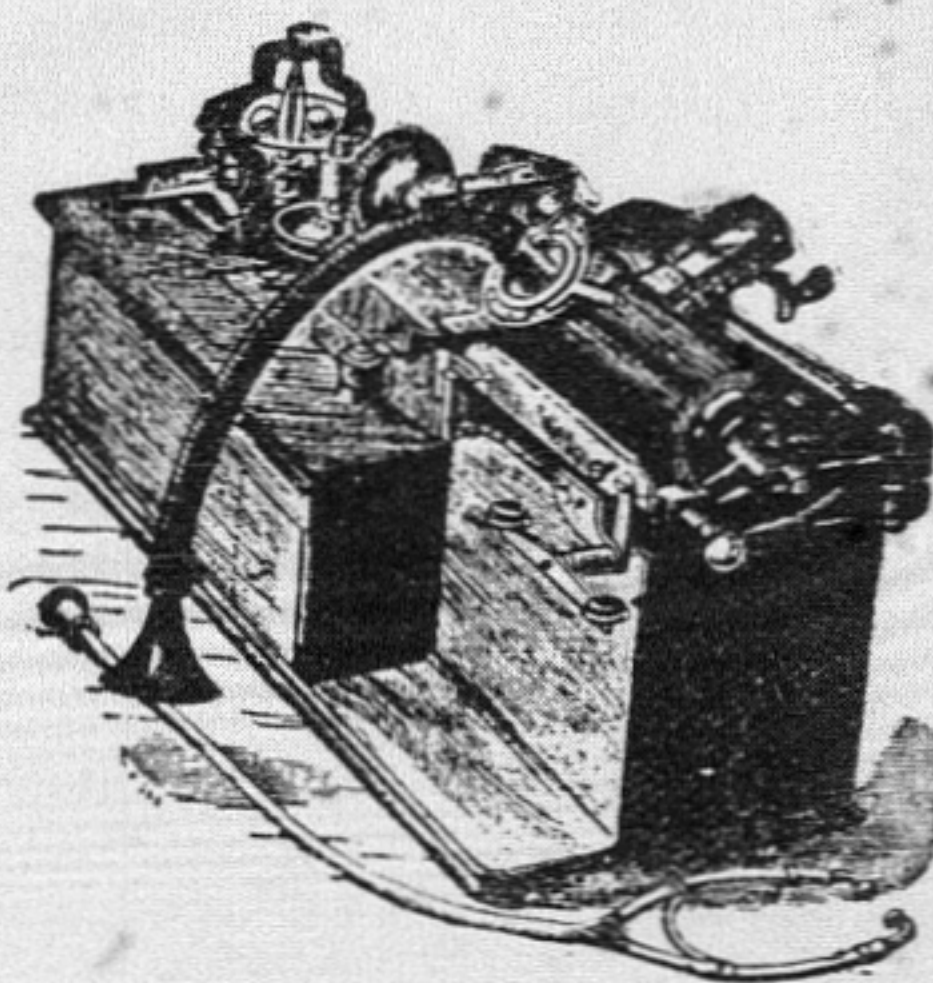
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Our catalogue now contains nearly two hundred selections by this most accomplished and famous band, and is being constantly added to. The band is not only the BEST KNOWN, but is the BEST TRAINED band in the world. It can play more than one thousand selections, all of which are available to our patrons. No band music can compare with this.

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(For details as to our Language Department, see advertisement covering another full page in this issue.)



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relating to the Phonograph, Typewriter, or Electricity, in any of their practical applications, is cordially invited, and the coöperation of all electrical thinkers and workers earnestly desired. Clear, concise, well-written articles are especially welcome; and communications, views, news items, local newspaper clippings, or any information likely to interest electricians, will be thankfully received and cheerfully acknowledged.

MR. EDISON'S ENTHUSIASM.

Among the principal forces of nature known to man under the appellations of heat magnetism and electricity, and subject to his control, the latter seems to have reached, through the directing influence of scientists, the position of supremacy; that is to say, it may be forced to perform the most delicate and subtle, as well as the most diverse and stupendous duties.

It is a steed whose qualities must be thoroughly understood in order to prove its capacity; and to this high standard of usefulness it is at present called through the untiring efforts of the chief apostle of the cult, Mr. Thomas A. Edison.

Discussing the most recent victories of mind

over matter obtained by this untiring experimentalist in the electric domain, we find that he can apply electricity to any sort of car, and uses rails, picking up a current through two inches and a half of mud.

Electric mining has also become the order of the day in his demesne, whereby the poorest quality of ore can be purified and rendered profitable, and that, not by working the veins, but "by blasting down the whole mountain and crushing with powerful machinery the matter, from which the ore will be extracted by magnetism."

With the kinetograph likewise, progressive movements are in the course of accomplishment which to the uninitiated seem a marvel. To bring out in life-size the pictures of a man making a speech is the end for which these efforts are made, and the difficulty of taking forty-six photographs an inch square in a second is great.

Alternately serious and buoyant in his manner and speech, the Sage of Menlo Park talked enthusiastically of his power to change the pathway of commerce, by saving to his country four or five million dollars, now paid yearly to Spain and Cuba, for ore which he can produce at home by the electric process.

HUMAN DESTINY.

The human race is neither wholly selfish nor wholly cruel. International enterprises and movements, even wars, apparently and ostensibly undertaken for national protection or aggrandizement, are in reality the means of affording an outlet to ambition, to genius, to the expansion of population, and especially to the unification and spiritual elevation of humanity.

It is true that war is the definition of cruelty;

yet it destroys to reproduce — as farmers burn grass to fertilize their fields. So colonies are organized and men expatriated to people a wilderness; likewise expeditions dispatched into polar and barbarous regions in the cause of science, commerce, or philanthropy, whose forces are depleted and perhaps annihilated by sufferings and death.

Yet whatever the trials, vicissitudes, or fate of these may be, there has been a purpose accomplished. A shuttle goes out, carrying with it a thread, with every wave of thought conceived and executed by man, and this thread is woven into the net-work that binds all nations together.

How forcible is this metaphor when applied to the electric cable spanning the seas, and ere long "putting a girdle around the earth." Electricity is the grand instrumentality which constitutes a major force in this net-work. Others exist, playing separate though harmonious parts; but all tend to unify and spiritualize the human race.

HINTS TO PHONOGRAPH INSPECTORS.

Thorough investigation of the subject will disclose important facts to those interested in the general appearance of phonographs in constant use. Entering an office, what is observed? The usual array of furniture, desks in good position, type-writers and phonographs conveniently near. A close examination of the latter machines discloses the fact that in some instances they are besmeared with oil and grease, the cylinders are left unpared or covered with shavings, and the whole aspect of the once polished surface and delicately neat fittings and appurtenances are neglected and forlorn.

Along comes the inspector, whose exterior is in keeping with the instrument which he has charge of; he seats himself, takes a whack at the phonograph, gives a prolonged roar into the funnel, and pronounces the machine ready for use. A repetition of this hurried and simple proceeding is continued from week to week, until all reports are sent in and pay-day arrives. The trustful company, not having been informed as to the quality of work furnished, rates it as good and pays accordingly.

Following up further researches is discovered a better state of things; for there are always two sides to a question. At points where a faithful inspector exercised his sway it was easily perceived that the instrument had been overhauled, the rusty parts had received a polish, the adjustments were all correct, the cylinders were put into proper order, the electric motor ready, and the whole air

of the machine life-like and waiting, as it were, to respond to a touch.

It is a matter of gratulation in the ranks of the phonograph corps that the type of inspector first described grows less frequent every year.

The inspector of the future will be the careful, reflective, painstaking functionary who prides himself in keeping every instrument under his care in perfect condition; and who would be ashamed to receive payment for duties which are not faithfully performed. Let the honest inspector who keeps every instrument in each office he visits thoroughly clean, and in the right state for use, rest assured that if he does not always receive due recognition for well-discharged services, he will in the end come out right. His efforts to keep his plant clean will be appreciated in one place, if not in another, and he will reach the top of the ladder some day.

And *vice-versâ*, the careless and incompetent inspector will also be found out in time, and share the fate of all persons who prove inadequate to the tasks they undertake to fulfill.

We wish to call the attention of the members of the Phonographic Republic to the relations existing between them and THE PHONOGRAM, for the purpose of reminding them that this magazine represents a *trade*; that it is the medium whereby such information as affects the interests of that trade is communicated to each and all individuals composing the organization; and that the sole means of maintaining its usefulness is to advertise every species of appliance that may be produced pertaining to the phonograph, so that the various agencies will be enabled to keep pace with the demands of purchasers.

This important suggestion was made by one of the most prosperous and well-conducted associations in the federation, speaking by the mouth of its presiding officer, Mr. James L. Andem, who stated that he had traveled one thousand miles to look up new machinery, applications, and points, when these should have been furnished to him gratuitously in a short time and small compass from head-quarters, *i. e.*, the office of THE PHONOGRAM.

ELECTRICAL CENSUS.

A short time since the *Electrical World* gave a report of the elaborate census which it is proposed to carry out in the State of New York. The investments of our country in electrical interests amount to one billion dollars. Interests of such colossal size should not be lightly passed by. The proposed enumeration for New York should be made; by this means a mass of invaluable information can be gathered. Not only the direct, but the indirect effects of this would be to increase popular confidence and respect.

ELECTRIC NAVIGATION.

One of the most striking facts of the Universal Exposition held at Edinburgh in 1890, was the trial of electric navigation, due to the action of the General Electric Power and Traction Company, which had established on the canal of the Union a passenger service carried on by a flotilla of electric boats. It was the first practical application of this kind in Scotland, and we learned with pleasure that the public received it with favor. Despite the unfavorable conditions—terminus at Edinburgh situated in a secondary street, of unpleasant appearance, rainy season, etc.—the electric boats constituted one of the principal attractions of the Exposition. The number of travelers transported from the 31st day of May to the 11th of October amounted to seventy-one thousand and seventy-five, not comprising those furnished with season tickets and such as journeyed gratuitously.

This first appearance of electric navigation in Scotland permits us to hope that we shall soon see boats of the same sort circulating on our rivers and estuaries.

Allow us to indicate to you rapidly the advantages resulting from the substitution of electricity for steam in navigation. Instead of cumbrous machines, there are accumulators concealed under the seats, and leaving at the disposition of the travelers that space occupied by machinery on steamboats. For the same number of passengers the steamer should be at least twenty-five per cent. larger than the electric boat. There is, therefore, economy in favor of the latter, and not only in expense of establishing, but also in carrying, since there is less dead weight to carry. On the electric boat there are no odors, no smoke, no noise, which are the inseparable accompaniments of the best steam machinery.

The tremulous motion due to the movement of the shaft of the propeller is modified, the electric motor giving a gentle and continuous impulse, instead of a series of jerks, as in the case of a steam cylinder piston.

In fine, although steam is a faithful servant, it is often dangerous, and we know what terrible catastrophes have occurred by a slight negligence in handling this force. With electricity danger disappears, and the only harm it can do is to cause the boat sometimes to stop. There is absolutely no danger in the electric apparatus used to transport passengers; and upon this point we insist, as we have heard many persons declare they were afraid of a shock or of a watch being deranged by electricity. The electric boat has, besides, many other advantages: one man can manage the motor;

there is no boiler to be warranted and periodically inspected; the boat creates its own power, instead of having to effect this by burning coal, and this energy can be regulated by simply turning an accumulator.

The use of these boats is not limited to the conveyance of passengers or the demands of pleasure. The company has already equipped one for the Spanish Navy, and when one thinks of the services that can be rendered by this species of boat to a man-of-war, one is astonished that the British Admiralty would allow itself to be forestalled in this way by the navy of Spain.

NEW AGENCIES.

Mr. T. R. Lombard, Vice-President of the North American Phonograph Company, has just returned from a successful tour through the South-western States, where he had gone for the purpose of opening up new agencies. He has reorganized the Tennessee Phonograph Company, which has begun business under auspicious circumstances.

This movement gives an impetus to the phonograph business here and speaks well for the perspicacity and enterprise of the people of the South-west; for wherever the phonograph is used, the throb of higher civilization will be felt.

THE COMING STORAGE BATTERY.

An invention called to play an important rôle in the industry of accumulators, not only on account of its adaptability to the needs of the marine service, but to all purposes for which this apparatus was designed, is the Reynier Elastic Accumulator. We wish to impress upon the public that, for the reasons herein stated, this battery will supersede all others in its special sphere. In the list of its merits are included:

1. Its capacity for lighting houses without canalization.
2. Its convenient size and weight, which render it easily transportable.
3. Its form, which permits it to be hung up.
4. The arrangement of the springs gives to the active solid matters an artificial elasticity by which the battery attains greater activity and great specific power.

In the next issue of THE PHONOGRAM we will give cuts and detailed description of this storage battery.



REVOLUTION IN THE STUDY OF FOREIGN LANGUAGES.

THE PHONOGRAPH AS A LANGUAGE TEACHER.

About twenty years ago, Charles Dickens opened one of his lectures with the remark that the man who would teach foreign languages in a common-sense way was destined not only to be a benefactor to humanity, but would derive large pecuniary profits for himself.

I wonder whether Dickens was aware that in the crowded assemblage, which filled Steinway Hall to overflowing there was one man present who had just completed such a work for the mastery of the German language? Possibly so; for Mr. Dickens had that very afternoon held a conversation in the Harpers' editorial rooms with this man—then a reader for the Harpers—and had discussed the subject with him.

Five years had still to elapse before the young man could find a publisher who would listen to his radical ideas; but though the enormous profits which Dickens predicted have thus far come mainly to his publishers only, his works are used in every civilized country, and his name has become a household word wherever foreign languages are studied.

Dr. Richard S. Rosenthal, who is in the

foreground in the accompanying photograph of the Washington Phonograph Language Club, is the author of the *Meisterschaft System*, and the fact that his books have now reached their five hundred and fiftieth edition is a sufficient proof of the immense popularity of his system. "His method," says a leading educator in the *London Athenæum*, "teaches the pupil to speak from the very first lesson in long, connected, and idiomatic sentences, and leads within a surprisingly short time to perfect mastery of every-day and business conversation."

Dr. Rosenthal very sensibly asserts that "the true end and aim of our linguistic education must be to *actually* speak the modern languages, and to *really* be able to converse in them fluently and idiomatically."

Any system or method which accomplishes this is therefore of the greatest value to the public.

For fifteen years Dr. Rosenthal's *Meisterschaft System*, *i. e.*, *Mastery System*, has been before the public, and its pre-eminence over other methods has not only been acknowledged by the press, but by

the leading European and American educators. It has been applied to the practical teaching of eleven living languages, and for the last eight years Latin and Greek have been taught by it in many German schools and academies.

Nearly four hundred thousand authorized copies have been sold in Germany, Sweden, England, and the United States.

In Russia, Holland, Turkey, Italy, Hungary and Greece adaptations and translations of the system have appeared—for the

been, they are as a mere nothing to what Dr. Rosenthal is now doing.

To him belongs the honor of having made the first systematic, scientific, and practical application of the Edison phonograph as an educational aid in teaching foreign languages.

Edison's perfected phonograph, as we all know, is one of the greatest inventions of the age. It records with marvelous accuracy every word spoken into it, and repeats the finest variations of sound with



greater part without the author's consent; and while no reliable facts as to the sales can be given, it is safe to say that at least one hundred thousand copies of unauthorized adaptations have been sold.

In fifteen years Dr. Richard S. Rosenthal's *Meisterschaft System* has been introduced into every civilized country. Nearly half a million of copies have been sold during this time, while its circle of students comprises at least five times this number.

Great, however, as these results have

unerring and absolute precision. In teaching the correct pronunciation of foreign languages the phonograph is unexcelled. It is in fact "the ideal teacher." The lessons recorded on the instrument by the most cultivated teachers, specially trained for this work, are perfect, and as the listener can have each sentence repeated thousands of times, he is assured of attaining a perfect pronunciation and intonation of any and all foreign sentences.

Where is the living teacher who can accomplish this? Where is the man who would repeat the same word or sentence over and over again, until even the dumbest

intellect could not fail to attain control of the foreign tongue? What professor could at all times be at the pupil's beck and call? What teacher could speak to you at odd times and intervals, which come into the life of the busiest man, and which he can now make useful to master a foreign tongue? What teacher can instruct in a loud and yet so silent a manner that the very clerk who occupies the same desk with you would hear nothing, while you, with concentrated attention, drink in the life-like sounds of your ever-helpful and ready instrument?

The Meisterschaft System and phonograph combined have solved the most difficult educational problem of the age; they have given us a perfect, practical, thorough and rational method, and an always ready, never impatient, always present, and ever-teaching instructor.

Realizing the enormous importance of this work, Dr. Rosenthal removed his headquarters from Boston to Washington, the intellectual center of the United States. He opened an institute for the teaching of modern languages, with the aid of the phonograph, and nearly two hundred of the best-known people of Washington attended his school during the past season. The second year is now begun. Here may be found, at all hours of the day, some of the most distinguished professors, clergymen, physicians, Congressmen and teachers, who gather around the phonograph and listen with absorbed attention to their lessons in French, German, Spanish and Italian.

Each section has its own instruments. Not one word is spoken aloud during study hours. The phonograph alone has the floor, and teaches and talks with unerring accuracy.

Thus by the scientific application of Edison's marvelous phonograph the complete mastery of a foreign tongue has become an assured fact, and a few weeks of study lead now, with the aid of this wonderful instrument, to results which years of labor heretofore failed to accomplish.

Dr. Rosenthal, in the meanwhile, is busy in his private office, recording his lessons on cylinders, and testing and listening to those which his assistants have prepared. Daily orders come in from almost every State of the Union, and the Columbia Phonograph Company packs and forwards them to the numerous subscribers.

A NEW SCHEME.

George E. B. Putnam, who is conceded to be one of the brightest writers on advertising, and whose knack of writing catchy advertisements has given him a forward place in this new field, has published the following in a recent issue of the *Boot and Shoe Recorder*, the leading publication devoted to this important branch of business. It will doubtless be of interest to our readers:

Here is a scheme which, while it may not have millions in it, will be, if well worked, a mighty good advertisement for you.

The new phonograph, or graphophone, which works by means of an electric battery, is yet a great novelty. The fact that a full brass band can be compressed into a little cylinder a few inches long is one which can hardly be comprehended by the general run of people. The shoe dealer who is enterprising enough to have one on exhibition at his store will doubtless have a great many visitors. The very fact that they are induced to enter the store is one point of advantage. If you don't get them into the store, they will never leave any money there.

Imagine a stranger attracted by an advertisement in a daily paper, or a placard in the window, announcing that the phonograph may be heard by any one who may visit the store. The phonograph placed in the window, surrounded by an eager group of listeners, would draw a crowd.

The stranger enters, and when his turn comes to place the double ear-trumpet in his ears he hears a military band in a grand march. He has only to shut his eyes to imagine the soldiers, the banners, and all the fine fixings of a grand procession. This music fades away, and in place of it is heard a song, with banjo accompaniment. If the song is well sung and the banjo well played, every listener will wait until it is finished, no matter what the words are. Here is your opportunity. Have the minstrel sing the glory of your boots and shoes. You get in your little advertisement right here, and every visitor will listen. When the song is ended, the phonograph will add: "Ladies and gentlemen, I am only a ma-

chine. I do not wear boots or shoes, and I can not tell you all the good points of the shoes sold here by Mr. Dash. He has a fine stock, and he can fit your feet, and can suit your taste and your pocket-book. Hadn't you better look at his goods now that you are in his store?"

My word for it, the man who will get up such an exhibition in his store will be the talk of the country for miles around. He will get more advertising free than he could get for hundreds of dollars. Yet it will not cost much. I understand the machines are let for about ten dollars per quarter. The music can be arranged to suit you at a trifling expense.

I give you the idea. It is only partly mine, but it originated in the *Recorder* office. Now, I will give a free notice to the first shoe dealer who tries it. Who will be the enterprising man?

AS OTHERS HEARD HIM.

Up-town there is a phonograph, and the man who is running it is a hotel owner. He had a caller Tuesday whose "dander" was up. The room was quite full of people, and the caller had an insane desire to give his man a "piece of his mind." He did so. He berated him uphill and down. He didn't leave him, as he expressed it, in any kind of shape. All the time the object of the attack had on the counter by his side the phonograph in action, only the caller didn't know it. When he had finished, the Lewiston man said:

"Are you done?"

"Yes, I am done," was the reply.

"Just one moment," was the rejoinder; "I want you to hear what you said," and the merciless phonograph was reversed and the record pronounced through the machine so that all could hear it.

A blush overspread the caller's face. He listened in wonder and surprise. As oaths and epithets flowed out of the machine, the exact reproduction of his own vitupera-

tion, he moved away, and when all was done a man more sheepish and ashamed could not be found. Said he, after a moment's thought, turning to the Lewiston man: "I have had a valuable lesson. No man who would talk like that in public has any right to be considered. I want you to pull that record, as you call it, off from that machine and give it to me. I'll pay for it."

It was done, and the caller stood by the counter uttering apologies and whittling into pieces the wax cylinder that contained his remarks.

Office of CHICAGO CENTRAL PHONOGRAPH CO.,
Chicago, Sept. 24, 1891.

V. H. McRAE,
Editor PHONOGRAM.

DEAR SIR:

We inclose you under separate cover to-day a copy of the *Chicago Herald*, in which it speaks of the phonograph being used to instruct the voters in the Australian system of balloting. This does not give you a full idea of how it was used, and if you wish to make a note of the fact in THE PHONOGRAM, we will tell you how it was done. The *Herald* is a very public-spirited, enterprising paper, and established a booth for teaching Chicago voters how they were to vote at the last election, when the Australian system went into effect here. Mr. Sea, the business manager of the *Herald*, thought the idea of instructing the citizens how to vote under the new system was a good one, and dictated to the phonograph an explanation of the Australian ballot, which was shown to every one entering the room; and these instructions were repeated by the machine to one hundred or more sets of men during the day. It was a novel idea, and proved very successful.

Yours very truly,
W. S. GRAY,
Manager.

Office of LINOTYPE REPORTING & PRINTING Co.,
31 and 32 Park Row,
New York, Sept. 22, 1891.

NEW YORK PHONOGRAPH Co.,
257 Fifth Avenue, New York.

GENTLEMEN:

It affords us great pleasure to bear testimony to the value of the phonograph in our business in connection with the Linotype machine. We find that an operator on the Linotype is enabled to give us at least one fourth more product by its use than when "setting up" from copy, no matter how legible.

In addition to the speed thus secured, we attain that much-desired object, accuracy and uniformity in the spelling of proper names and uncommon words, as also correct punctuation and style; this, because the dictator dictates all the punctuation marks, spells but proper names, and indicates the general style of the work.

The notes of all the stenographers in our employ are dictated to the phonograph, and then the transcript made in metal bars with type on their surface, which bars are placed in the ordinary printing-press, and the beautiful print of the Linotype secured.

The rule of our office with regard to matter that is handed in in manuscript is to dictate it also to the phonograph, all the punctuation marks being given as the dictation is proceeded with. We do this in order to take full advantage of the great speed of the Linotype, which is capable of doing the work of from five to eight compositors, as well as to do away with the delays and uncertainties on the part of the operator by being compelled to decipher badly written and badly punctuated copy.

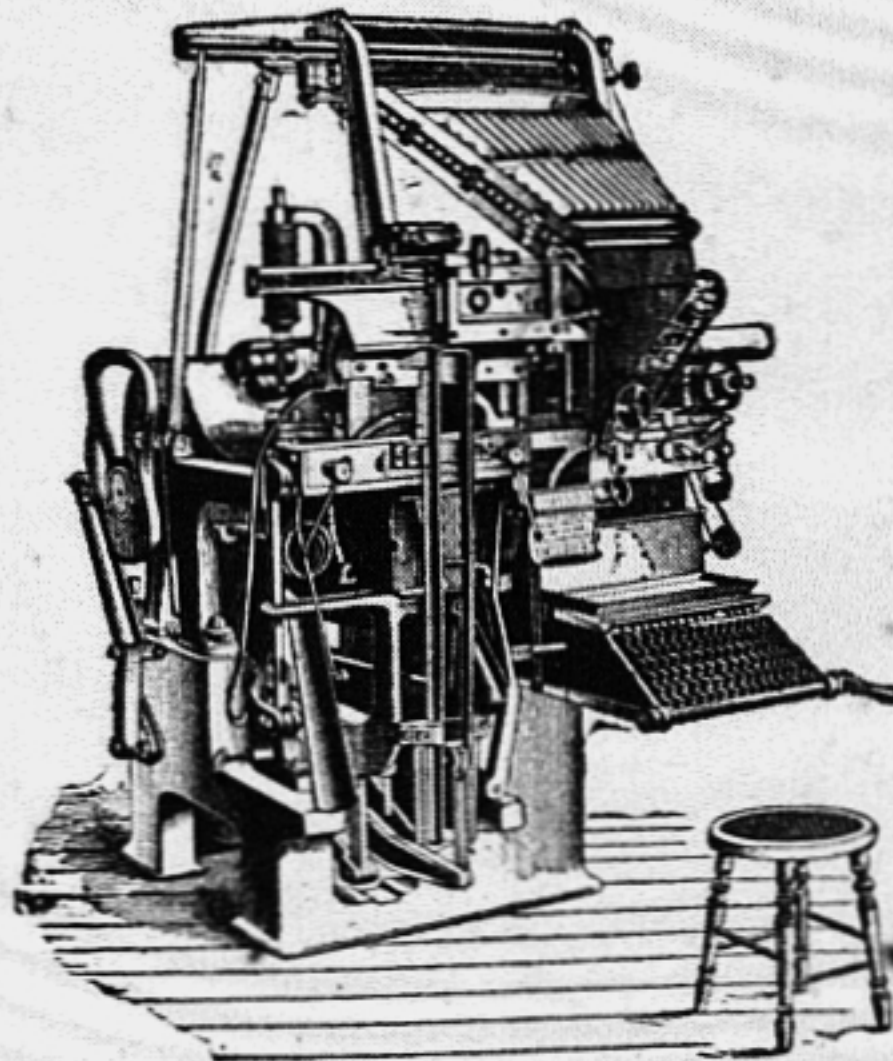
Our stenographers are delighted with the phonograph, as its use enables them to dictate their notes at the rate of one hundred and fifty to ~~two~~ hundred words a minute; thus relieving them of the tediousness and delay which result from dictating to the type-writer direct, which is rarely done at a higher speed than fifty words a minute.

We have a number of phonographs, and although they are kept constantly in use, they show no signs of wear, and we are never troubled with their getting out of order.

We are satisfied from our experience that it will only be a short time before the phonograph will come into universal use with stenographers and literary and business men.

We send you herewith a cut of the Linotype machine.

Yours very truly,
(Signed)
JAS. O. CLEPHANE,
President.



THE BATTERY QUESTION.

Believing that communication between the various State companies on the subject of batteries, their charging and economical maintenance, would prove of interest and profit, we sent the following circular letter to the different companies and agencies:

NEW YORK, October 12th, 1891.

GENTLEMEN:

The subject of storage and primary batteries being of great importance to you, and the discussion of same having been taken up in THE PHONOGRAM, we are desirous that you should give us statistics as to the average life of the storage batteries which you have had in use for the past six months or more.

Will you also kindly furnish us with any

special method you have of charging or handling same, and inform us if this method has acted as a material aid in preventing disintegration, buckling or short-circuiting.

Your ideas will be valuable to our readers. Also please state the most economical plan of charging or handling batteries which you may have arrived at. An early answer will oblige,

Yours very truly,

V. H. McRAE,
Manager.

The number of replies precludes the possibility of publishing each letter in detail, but a synopsis will bring out the valuable features of all.

Four plans seem to have been employed in recharging the storage cells. The work is done at the local company's office, at an electric light plant, by shipping to an electric company out of town and by continuous charging from primary gravity cells. The first-named method is most generally in favor and is extending as the careful handling of the cells, which is of paramount importance where satisfactory work is expected, becomes better understood.

On light circuits a resistance coil and ammeter will aid in securing the best results, though the amount of current given each battery per hour differs somewhat with the various companies. Approximate economy in charging at ordinary pressure is attained with large numbers of cells only, as resistance in circuit uses part of the current, which must be paid for, though it is only wasted in heating the resistance coils.

Hurried charging is injurious to the battery. A loss of at least ten per cent. can be expected from the indicated charge. Binding posts, nuts and washers should always be thoroughly cleaned each time the battery is charged. Do not try to make two volts push its way through dirt and corrosion at the terminals.

An average estimate of the number of

hours work required per week is about twenty. The principal trouble with storage batteries since "buckling" has been partially overcome by mechanical means would appear to be "sulphation," with consequent disintegration of the plates. This arises from using an insufficient amount of the diluted acid, allowing the plates to be exposed, employing the larger types of cells (no storage battery should be allowed to stand more than two weeks without recharging), or in allowing them to be completely discharged. The best results seem to be secured where batteries are charged every two weeks, before their life has expired. Where such a plan is carried out loss on plant in one case is reported as low as 15 per cent.; in another as high as 50 per cent. per annum, which means a total renewal of battery plant every two years. These, however, seem to be the extremes. Wherever this loss may fall it represents a serious impediment to the progress of the business, and should be squarely faced by every company. Whether it will be partially overcome by improved methods of handling and charging storage cells, or whether a primary battery can be found to overcome the objections heretofore raised against them as a class, is a subject for the diligent inquiry of those who have already accomplished so much toward reaching the goal of success in the phonographic field.

NIAGARA CONTROLLED.

Mr. Dobrowolsky, inventor and designer of the apparatus used in the Lauffen-Frankfort Electric Transmission plant, states that he would be willing to bid on a contract to transfer from one to five thousand horse-power from Niagara to Chicago if the opportunity were afforded. The distance is about five hundred miles, and the potentiality would be between forty and fifty thousand volts. There would be generated at Niagara five thousand horse-power—that is to say, an efficiency of sixty to

seventy-five per cent. Of this three thousand horse-power could be utilized at Chicago.

KEEP THE PHONOGRAPH CLEAN.

BY HENRY F. GILG.

The following quotation from a letter of recent date shows one of the difficulties with which phonograph companies have to contend:

"Considering the time required to keep it clean and in order and the cylinders ready for use, I find that I can better expedite my correspondence by direct dictation to the type-writer."

Dust and dirt are enemies of all kinds of machinery, whether it be the most delicate watch or the largest steam-engine, and arrangements are made to keep them in proper condition for work. Why the public should expect the phonograph to be exempt from the very little bit of work required to keep it clean, is hard to understand.

In all regulated establishments the type-writer operator is required to clean his type-writer every morning before beginning the day's work, insuring cleanliness and neatness in all of the letters for the day. Sometimes indifferent operators will allow considerable time to pass before they clean their machines, and the result is a clogging up of some of the parts. Instead of condemning the machines, they should proceed to clean them, and they will run like new.

Then, why should not the same attention be given to the phonograph, and not say, first thing, "The phonograph is no good?" If subscribers will observe John Wesley's proverb in regard to cleanliness, they will have no trouble with the phonograph.

The phonograph is the type-writer operator's stock-in-trade, the same as short-hand is the stock-in-trade of the stenographer, and he should see that he is always prepared with his machine for dictation. It would sound rather queer to hear a man say of his stenographer, as the one above referred to did of his phonograph:

"Considering the time required to keep my stenographer brushed up in his short-

hand, and his pens, ink and note-book ready for use, I find I can better expedite my correspondence by direct dictation to the type-writer."

Observation shows that even in the best regulated business houses the "tail sometimes wags the dog," and the operator will do as he pleases about the phonograph. The subscriber should make it a rule for his operator to keep the phonograph clean at all times, and to see that blank cylinders are at hand for dictation. If the employer does not compel his operator to do this, the phonograph can never be shown as a perfect success.

The Phonograph in the Treatment of Deafness.

Professor H. F. Garey, M. D., of the Department of Eye and Ear Diseases in the Southern Homeopathic Medical College, Baltimore, Md., has been engaged for the past three months experimenting with the phonograph in the treatment of deafness caused by catarrh. The large clinic in the dispensary of the college is being utilized with results which promise to revolutionize the treatment of deafness. Dr. Garey says that while it is yet too soon to present to the profession the results achieved, because of the fact that time enough has not elapsed to confirm the cures already made, he feels warranted in stating that those who are deaf and harassed by noises in the head (*tinnibus aurium*) have much to encourage them to hope that Edison's wonderful phonograph will prove the greatest benefactor to the human race produced in this wonderful age of progress.

St. LOUIS, October 17th, 1891.

V. H. McRAE,

Manager of PHONOGRAM,

Room 87, Pulitzer Building, N. Y. }

I have read several numbers of THE PHONOGRAM with great pleasure. It is a great compliment to your energy and ability, and I earnestly hope that you will succeed in making it all that you desire.

As to the phonograph, the best compliment I can pay to it is to say that I have just ordered a third one to be inserted in my table, and to be used exclusively by me for dictation.

Very respectfully yours,

SEYMOUR D. THOMPSON,

Editor *American Law Review*.

THE PHONOGRAPH IN COUNTRY TOWNS.

A LOCAL AGENT.

"What's that—something to cure ears?"

"No; I reckon it's a lung-tester."

"Look out, Sam! you will get a shock!"

"I'll bet it's some kind of a sell."

"Sell, is it?" Sam shouts, with the tubes in his ears. "You just hear this. It's a regular band playin'. No sell about that. If that ain't worth a nickel of any man's money, I'll pay for it."

Everybody laughed at Sam's enthusiasm, expressed in such loud tones; but at his recommendation even the most skeptical dropped his little nickel in the slot and heard the phonograph.

"How do you load them, mister?"

"They don't load them. The music comes over the Western Union wires," volunteered a wise by-stander, in reply.

"No!"

"Yes, it does. Didn't you hear him say that piece was played by the United States Marine Band, of Washington, D. C.?"

Then they both peered around the case to see where the wires came in.

The writer was an amused auditor of the foregoing when in a small town with a couple of slot machines, a few weeks ago.

The question as to the practicability of placing the phonograph in small towns is, apparently, not yet settled. While it is evident that the small country places present a field (ripe with nickels) for the phonograph agents to work in with their slot cases, just the proper place for gathering the harvest does not seem to have been discovered.

From his experience in the country recently the writer is of the candid opinion that a phonograph will pay in every town of a thousand or more inhabitants. My experience was just this:

Two nickel-in-the-slot machines of a new style of action were shipped by freight to a town of two thousand inhabitants. They were placed on the sidewalk in front of two drug-stores about three blocks apart. The machines were uncrated and in perfect operation in a very few moments, and each took in six dollars from 10:30 A. M. to 9 P. M., when the stores closed and the machines were put inside. As the weather was fine, the machines were put out on the sidewalk each day. They were kept in town seven days, and the receipts were as good the last day as the first. Total receipts were seventy-six dollars. One reason the receipts kept up so well was that the machines never failed to operate. A good machine is an absolute necessity in a town or village, as country-people think more of a nickel than city folks, and if the machine failed to operate with their nickel, even once, it is doubtful if they would ever risk another. They were left without attention from Sunday noon until Monday night at nine o'clock, and were then found in perfect operation. The music was not changed at all Monday, but was changed sometimes twice on the other days. Some pieces were put on twice during the seven days. Without making any effort to place the machine there, as some parties were figuring on taking the county in which this town was situated, the two machines were packed up under protest from the appreciative citizens and shipped to a smaller town of about a thousand inhabitants—"all above ground," as they now state in the West when giving the town census. The machines remained here but four days, as the writer was obliged to return home. They took in fifty dollars in the four days, pay-

ing even better than in the larger town. The last day's receipts were twelve dollars for the two cases. Very few country-people were in town, and it was surprising to find how many nickels the machines gathered in in this quiet place, particularly as there happened to be a counter-attraction

merchant in a town he would undoubtedly make it pay. It would be the very best advertisement he could possibly have, and by judicious management the case would soon pay for itself. A number of country merchants who happened to be just outside the writer's territory wanted a slot machine



each evening. The labor and expense of the trip were very slight. No commission whatever was paid the store-keepers where the machines were placed. They were very glad to have them there.

It is quite evident that a slot machine—a good one—will pay in these small towns. If a case could be disposed of to some live

simply for the advertisement it would give their store, and offered to take care of it without charge, and did not want any of the receipts, providing a machine could be put in their places of business.

The merchant could not afford to pay an exorbitant price for his machine, nor buy very much music. The latter is an item of

larger expense to a person with only one or two machines, and the way for him to manage economically would be to exchange records with some agent and to buy records that had been used but were still in good condition. He could not afford to pay a dollar and fifty cents for records, and unless he could secure them cheaply and have frequent changes, he could not make a success of his business. He should, of course, have a first-class slot machine, one that will not get out of order and one he can understand, and also one that will not require much battery power, obviating the necessity of frequent recharging. The cases the writer used were each operated over one thousand times by the same battery, and it was far from being exhausted.

Exhibitions could be given at the district school-houses, near town, during the winter, which would undoubtedly prove profitable; and incidentally, the phonograph could advise the country-people who would gather in large numbers where to trade in town—for a consideration, of course, from the merchants.

The writer had a recent request from a country school-teacher for a phonograph to give entertainments at country school-houses this winter. In town the phonograph could earn a good many dollars as chief entertainer at church sociables and at private parties. While in the town first mentioned, the writer took a phonograph out of the slot case one evening at the request of a gentleman who wished to have it furnish music to entertain his guests while they played cards.

To be sure, the average country or town merchant is very conservative and seldom makes an investment of any kind; but if a suitable party can not be secured, a slot machine can be left in some good place, an automatic counter attached to the machine, music supplied from head-quarters at trifling cost, and the party in whose store the machine is left instructed in changing

the music and operating the phonograph. The store-keeper will gladly look after it for the sake of having it in his place, and would not expect any percentage whatever.

This latter plan has been impracticable heretofore on account of the lack of a perfect slot machine and of a storage battery particularly suited for isolated places. There is now, however, a machine which has just been placed on the market that can be intrusted to the inexperienced in country places. While batteries now in use will operate this machine from four to six weeks, we are advised that a new battery, still better suited for phonograph work in out-of-the-way places, is soon to be ready for sale.

There are not many amusement features in country towns, and it is doubtful whether the novelty of the phonograph will ever wear out in those places. The inhabitants seldom hear fine vocal music, and as their town does not possess a good band, if any, they appreciate the music reproduced by the phonograph. The writer saw one young musician drop in ten nickels in succession that he might learn the "New Paris Waltz," as played by Issler's Orchestra.

The phonographs will certainly pay in country towns, if properly handled. This is a question that should interest the several companies, and the subject is deserving of discussion by those better informed than the writer. There may be those who have solved the question to their satisfaction and profit, and their methods would make interesting and valuable reading for others.

As some State companies permit traveling with the instrument, while others do not, there is room on this account for various opinions regarding the phonograph in country towns.

The phonograph can not always depend upon cities for its patrons, and the sooner it can be put to work successfully in gathering in the nickels of the untraveled countryman and villager, the better it will be for us all.

THE INVENTOR OF THE PHONOGRAPH.

We are happy to have it in our power to lay before the public a likeness of the inventor of the phonograph, which is by far

Now, the improvements in its construction are so great that it only resembles its former self as a man at twenty-five years of



the best yet taken. It represents Mr. Edison as he appeared in 1878 before the National Academy of Sciences in New York.

The instrument which has added so much to his fame was in its infancy at that time.

age, who has been graduated in a university, bears a likeness to the same individual when a school-boy of eight.

Each year that passes finds the mind of man penetrating with keener research

into the secrets of nature. The study of sound has occupied numerous philosophers for a long series of years, and Helmholtz especially has discovered a vast number of facts appertaining to it. Every one knows that certain races of men and certain animals hear sounds undistinguishable by man in general.

Arguing from that fact, it is believed that the phonograph will ere long be made to reproduce sounds which no mortal ear can catch; and this statement has a meaning which is of importance in the universal field of science; in other words, as regards the relations of one thing to another in the mighty scheme of creation. At some future moment we may possibly enlarge upon this theme.

EDISON AS A WRITER OF ROMANCE.

The report that the great electrician, Edison, was about to publish a romance has been for some time past in circulation.

To-day it is confirmed. It is an "electric" romance which the inventor of the phonograph will write—a romance showing us what society will be in the twenty-fifth century, molded, so to speak, by the continually renewed applications of electricity, into the most prodigious transformations.

Mr. Edison will have a collaborator in this work, the writer G. P. Lathrop, who will aid in the specially romanesque portion of the book, which will certainly appear before the world as one of the literary curiosities of the close of the present century.

The Phonograph as a Reproducer of Music.

To the Editor of The Tribune:

SIR: In your issue of September 1st a letter from H. E. Krebbiel, dated Ruedesheim-on-the-Rhine, and headed "The Phonograph and Primitive Music," contains statements about the phonograph which are likely to mislead. The suggestion is made that accuracy is unlikely to be obtained, because it is impossible to secure

the same rate of speed in reproducing as in recording musical sound. The writer says:

"A simple device to secure absolute regularity of motion should be applied, and the record and transmission should be made at absolutely the same rate of speed and with unquestioned regularity of motion."

In Washington the phonograph is more generally known than elsewhere, not only in the office as a substitute for the shorthand amanuensis, but in the home for the reproduction of the choicest vocal and instrumental music. Here the letter of Mr. Krebbiel will be recognized as the outgiving of one who lacks knowledge of the mechanism of the phonograph. But for the enlightenment of others not so well informed, permit me to say through your columns that at the time the improved phonograph was given to the world it had "a simple device to secure absolute regularity of motion," and that all phonographs of to-day have such a device, which fully meets the requirements. The experiments referred to were undoubtedly conducted by persons not fully instructed in the use of the phonograph, and thus inaccurate conclusions were reached. All who study the progress of new inventions know how frequently this occurs and how much misinformation is often given to the public in consequence.

EDWARD D. EASTON,
President Columbia Phonograph Company.
Washington, D. C., Sept. 2, 1891.

A Miniature Underground Railroad.

A new and ingenious system for transporting parcels has been devised by Mr. A. R. Bennet, of London. A miniature underground railroad, or, rather, a system of electric railways radiating, from a central station, are to be laid; and tubes two feet wide by three feet high will be propelled over the railways, in which the parcels to be delivered will be placed for transportation.

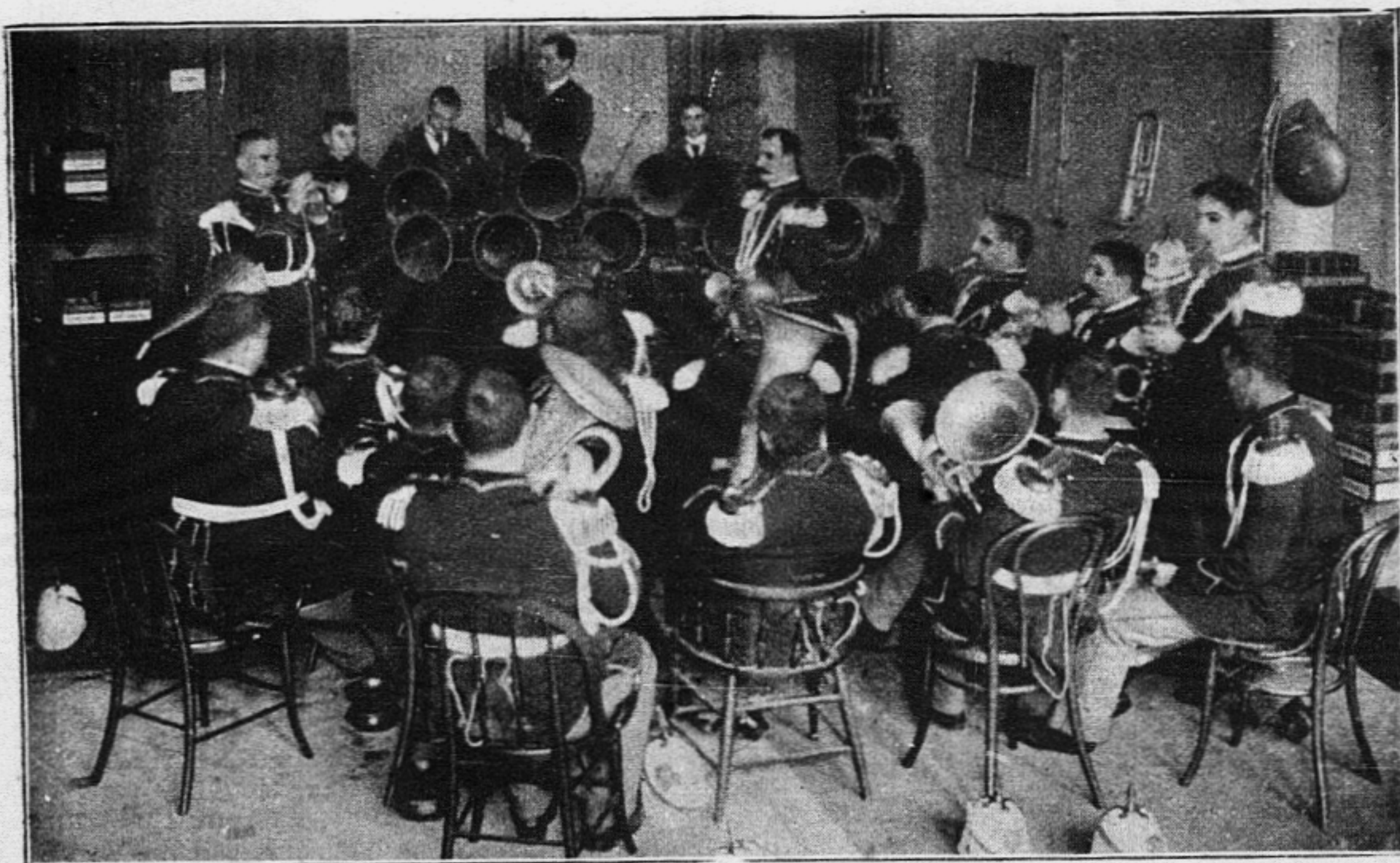
By a singular coincidence a similar plan had been conceived a year ago by a lady in New York, intended for the service of the city mails in New York and Brooklyn. This has not been put into practical effect.

PHONOGRAPH RECORDS BY THE U. S. MARINE BAND.

The music of the United States Marine Band, of Washington, D. C., is now so well known to users of the phonograph and patrons of coin-slot machines, that *THE PHONOGRAM*, desiring to give its readers precisely what they want, irrespective of cost, has procured, after considerable effort and expense, the fine photograph of that

without notes, more than five hundred different selections.

Much of the music played by this band to the phonograph has been arranged especially by the band with a view to the best phonograph effects; and the patient experimenting of Professor Bianchi, who is in charge of the musical department of the

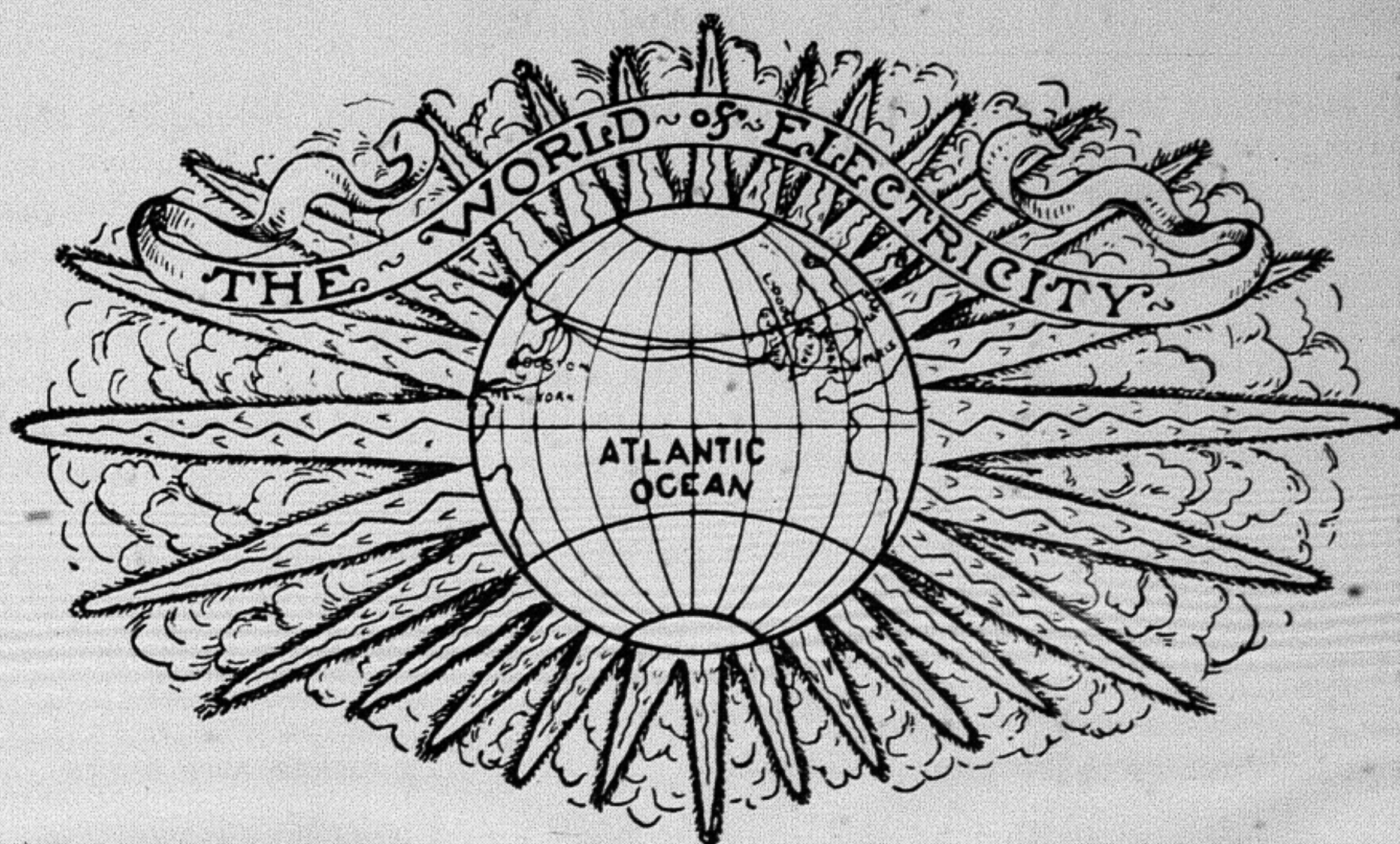


band while it is making records for the Columbia Phonograph Company. The photograph shows the band in full uniform, as it appears when playing for the President of the United States at the White House, on state occasions, or in the grounds of the White House in pleasant weather.

This is, in many respects, the most celebrated band in the world. It can play,

Columbia Phonograph Company, has borne fruit in an output of superior records.

With regard to musical records, it may be here stated that any one possessing an ordinary knowledge of the phonograph can make them, but perfect records are only obtained by using the utmost care and precision in placing the horns and by the perfect running of the phonograph.



A WONDERFUL FOUNTAIN PRODUCING MUSICAL SOUNDS.



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 T the village of Ardestorf, near Buxtehude, states the *Révue Française de l'Etranger*, there exists a fountain of about twenty-four meters in depth, in which is placed a suction-pump that conveys the water inside the kitchen of a neighboring habitation, and presents a singular phenomenon. From time to time a singular noise that may be heard for a considerable distance proceeds from it. This is at first like the resounding of distant bells, with which mingles a plashing, a rustling, a clang. The peasant who lives in the house supposed, on first hearing it, that the pump was loosened and allowed the water to escape; but examination proved there was no foundation for this idea. Finally, long experience has demonstrated that there is correlation (or reciprocal action) between these rumbling noises and the condition of the atmosphere. When the weather is calm,

the spring is silent; when it is about to rain or blow, it raises its voice.

Mr. Roth says that at times a listener would believe he heard the beating of drums or the metallic ring of a deep-toned bell. The noise ordinarily begins by a low humming, like that of water slowly boiling; then begins a clattering like that of the lid quivering on an iron pot; at last, when the most intense moment of the phenomenon occurs, a sound like the whistling of wind caught in a chimney is heard. When the noise ceases to be perceptible outside, one continues to hear at isochronal intervals, in the depths of the pipe, a slight ebullition like the rising of gas bubbles.

Mr. Roth has concluded from repeated observations that the phenomenon partly depends on atmospheric pressure; a heavy fall of the barometer causes the fountain to rumble; if the needle remains high, it is quiet; this last phase, however, is not invariable. In general, the mysterious insurrection precedes the movement of the barometer.

Mr. Roth tried in vain to discover the disengagement of gas; he found nothing resembling it. Its temperature was 20°

C inferior to that of neighboring springs having the same depth. No trace existed in it of carbonic acid or inflammable gas. Mr. Roth inquired if any of the springs on the adjacent farms made similar noises. He applied his ear to the orifice of each discharge-pipe, after having stopped up all exterior openings of the coffer, to suppress the sonorous waves produced by the wind, and he then perceived, at the moment when the other fountain was drumming, a sort of distant ebullition, like that which this one produced when its agitation was beginning.

PURIFYING ORES BY ELECTRICITY.

Application has recently been made for a patent for melting iron ore by electricity, which it is claimed will produce metal one hundred per cent. purer than that submitted to other processes.

The metal is placed in a cupola furnace, through which an electric current is passed, forming arcs at the electrodes, producing sufficient heat to melt the iron rapidly. The molten metal flows into a receptacle beneath the furnace. By this method the use of coke, lime, and sand is dispensed with, and one half the time and cost of production saved.

PATTI AT HOME.

An American gentleman, who is an intimate friend of Mme. Adelina Patti-Nicolini, has just returned from a visit to the fairy castle of the famous singer, at Craig-y-Nos, near Swansea, Wales. "Now that I am back in America," said he, "my visit seems a dream. Such luxury and wealth I never before witnessed. The castle is lighted by electricity, electric motors are used wherever possible, and private telegraph and telephone lines connect the castle with London. In the billiard-room is a thirty-thousand-dollar orchestrion operated by electricity. It is as delicate as a human

voice, and very often the maker is summoned by telegraph from Germany to adjust it. The new theater which Patti has built near the castle will accommodate three hundred people, and is a little gem. It has the regulation slanting floor, and this is so arranged that it can be raised or lowered to any desired position by means of electric motors. The electric light and power station is a handsome stone building, situated at a little distance from the castle. A most complete system of electric burglar alarms protects the castle from uninvited intruders.

ELECTRICITY CURES AND KILLS.

Death caused by lightning, *i. e.*, electricity, is an old story, and of late man's grasp and control of this wonderful invisible fluid enables him to direct its action toward any living object with the certainty of terminating life, when this end is sought. But as, in the economy of nature, certain agents, both mineral and vegetable, have the power to destroy and to prolong life, so with this element. Medical men, therefore, are daily bringing it into use as a curative agency, and find it in a variety of cases more effective than any other remedial force, which large numbers of medical and learned treatises now show.

IMPORTANT PATENT DECISION.

Commissioner Simonds, of the Patent Office, has, in a decision involving an invention in electric railways, reversed the decision of ex-Assistant Commissioner Fisher, thereby awarding priority of invention to the patentee of Letters Patent No. 305,194, issued September 16th, 1884. The decision lays down the general rule governing the question of priority of invention to be that he who is the first to conceive of an invention is entitled to a patent if he reduces it to practice with reasonable diligence; but if he does not reduce

it to practice with reasonable diligence, he who is subsequent to conceive, but first to reduce, will prevail. The commissioner further holds that when one of the contestants has a patent and the other is an applicant for a patent for the same invention, the latter, in order to prevail over the patentee, must present a case both as to conception and diligence which does not admit of a reasonable doubt.

The Supreme Court of Mississippi has rendered this decision regarding the delivery of telegraph messages: "In order to sustain an action for damages from failure to deliver a telegram, it must be shown that a contract, actual or implied, existed between the sender of the message and the company. When a man writes a message on the leaf of his note-book, tears the leaf out, and sends it by a messenger to the telegraph office, without paying, or offering to pay, or agreeing to become responsible for the charges for sending it, no contract exists between the parties, and no recovery can be had against the company for failure to deliver."

BURTON HEATERS.

One of the interesting exhibits at the recent National Electric Light Convention in Montreal was that of the Burton Electric Heater Company. The heaters, exhibited in actual operation and on an incandescent light circuit, awakened hearty interest among the railroad men and electricians on account of their varied and practical usefulness.

There was a complete exhibit of heaters at the Pittsburg Railroad Convention, where careful examination of this apparatus was conducted, accompanied by full explanations of its merits from the inventor, Dr. Leigh Burton. An opportunity was

in this way afforded to visitors to compare the Burton Heater with others intended for similar purposes, and a correct estimate of their value obtained.

Heating and lighting by electricity evoke universal interest, and especially with those who control or are concerned in railway affairs; therefore the apparatus designed to meet this demand which is first chosen will elicit wide attention.

Four Minutes to London and Back by Telegraph.

A broker on the floor of the New York Stock Exchange, says the *Sun*, can cable a message to his agent on the floor of the London Exchange and get an answer in four minutes.

There are now three operators who do nothing else but attend to this stock business. There are on an average three hundred messages sent daily from New York to London between the hours of ten and twelve.

The business is confined to a few brokers in both cities.

The messages are sent by overland wire direct to Heart's-Content, N. F., and are cabled from this point to Valentia, Ireland. Here they are transmitted by wire to the floor of the London Exchange. The same route is used for return messages, and this complete circuit has been made in three minutes, though four minutes is the regular time.

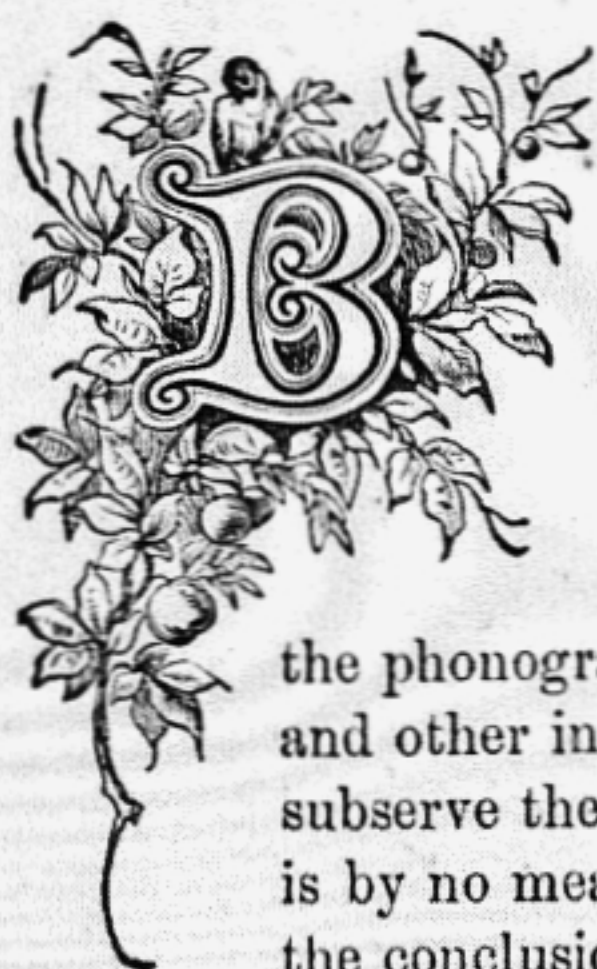
This so closely allies the New York and London markets, that the slightest fluctuation in one is perceived instantaneously by the other.

The telephone business of London is done by means of overhead wires, but the Duke of Marlborough is looking for an underground franchise.





TELEPHONY.



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BECAUSE this most useful and ingenious apparatus is not so much *en evidence* throughout the world as the phonograph, the type-writer, and other instruments that go to subserve the needs of our race, it is by no means safe to arrive at the conclusion that it is less important or stands in abeyance to the others. As well might one suppose that a compass or a printing-press does not hold its own among the helpful machines now in use. We only hear more of the phonograph and type-writer because they are later inventions, are convenient, portable machines, and perform a distinct class of functions more frequently demanded.

Telephony can not be dispensed with; and this fact is so well understood that the placing of telephonic fixtures continues to multiply in all countries, and experiments coupling it with a sister invention—that

of telegraphy—have been successfully conducted, both by Belgic and French inventors.

This latter process elicits enthusiastic encomiums from scientific authors, who are always on the *qui vive* for novelties in the domain of the application of force to matter; and a learned description of the twin service with diagrams appears in a Parisian monthly, as also a notice of the places of installation and directing genius of the new device.

We have also noticed a full and at the same time minute account of the plant at the capital of Spain—Madrid. Here a fine metallic tower has been erected from the work-shops of Mr. André, at Paris. The principal central bureau is established at Puerta del Sol, on the upper stories of the Hotel of Madrid.

The employés in the central bureau are all of the “gentler sex,” and the plate giving a photographic view of these, while engaged in taking messages from the instruments, affords a good representation of the general arrangement at that locality. They have connected telephones with

places of public amusement, and the effect is so popular that they intend putting them in all the theaters of Madrid.

AMERICAN STREET RAILWAY CONVENTION AT PITTSBURG, PA.

The tenth annual meeting of this association, which held its sessions in Pittsburg on October 21st, was very fully reported by many journals. We gather the following points concerning the electrical apparatus employed to run the cars on these roads from various sources:

1. It was there conceded that the reign of the horse-car was at an end.

2. That it was necessary to agree upon a standard rating for electrical machinery, standard dimensions for parts of car apparatus, standard nomenclature for methods and parts, and standard method of keeping accounts.

3. The important fact that the performance of similar machinery differed under different conditions.

4. That the result of a comparison of the cost of running electric, cable and horse-cars shows electricity to be the least expensive motor.

The experience of twenty-two electric roads, forty-five horse railroads and ten cable roads shows that, including all the expenses and the interest on cost of plant, the cost per passenger carried amounted on the electric roads to 4.53 cents; on the horse roads to 4.98 cents, and on the cable roads to 4.77 cents. The expense per car mile on these electric roads was almost 11 cents; transportation expense, 5 cents per car mile; while cost of power was 1.96 cents, including fuel, wages, oil, waste and other supplies. Repairs average 1.8 cents.

Mr. Henry B. Stone, President of the Chicago Telephone Company, has been elected director of the World's Fair. Mr. Stone was Vice-President of the C. B. & Q. R. R. at the time of the Q. strike, and his conduct at that time won him many friends.

The hearing of the Lowell, Mass., telephone suit has been postponed, by agreement between the parties interested, to some future date.

The Bell Telephone Company is removing its wires from the poles to the conduits in Rochester, N. Y.

ELECTRICAL PATENTS.

ISSUED OCTOBER 6, 1891.

No. 460,901—Type-writing machine. Daniel C. Way, Ord, Neb.

No. 460,847—Copy-holder for type-writers. James Chase, Rochester, N. Y.

ISSUED OCTOBER 13, 1891.

No. 461,262—Galvanic battery. Philipp Hieronymus, New York.

No. 461,023—Electric battery. Daniel M. Lamb, Boston, Mass.

No. 461,024—Composition for electric batteries. Daniel M. Lamb, Boston, Mass.

No. 461,025—Electric battery. Daniel M. Lamb, Boston, Mass.

No. 461,026—Compound for electric batteries and preparing the same. Daniel M. Lamb, Boston, Mass.

No. 461,027—Electric battery. Daniel M. Lamb, Boston, Mass.

No. 461,100—Die for making type-writer type-bars. Casper D. Wallace, Brooklyn, N. Y.

ISSUED OCTOBER 20, 1891.

No. 461,573—Telephone system. Eastern Electrical Manufacturing Co., Wheatfield, N. Y.

No. 461,471—Telegraphy. Elisha Gray, Highland Park, Ill.

No. 461,533—Type-writing machine. Yost Writing-Machine Co., of New York.

No. 461,790—Type-writing machine. George H. Woods, Hartford, Conn.

No. 461,610—Vending apparatus. Charles P. Herold, Philadelphia, Pa.

No. 461,470—Telautograph. Elisha Gray, Highland Park, Ill.

No. 461,473—Telautograph. Elisha Gray, Highland Park, Ill.

No. 461,474—Telautograph. Elisha Gray, Highland Park, Ill.

No. 461,472—Art of, and apparatus for, telautographic communication.

A Frenchman has invented an improved method of telegraphing so that it is practicable to transmit one hundred and fifty words per minute on a single wire. The message when delivered from the machine is type-written.

The price of platinum has advanced fully one hundred per cent., owing to its increased use for electrical purposes.

The Chinese language is said to be the best adapted to telephonic conversation, because it is monosyllabic.—*Electrical Review*.

A semi-annual dividend of three per cent. has been declared by the Edison Illuminating Company, of New York, payable to stockholders of record September 23d.



"IMPROVEMENT IS THE ORDER OF THE AGE."



THE PHONOGRAM has decided to present to its readers a series of articles, short yet pointed, setting forth the merits of the vari-

ous models of type-writers as they are already known or present themselves for the approval of the public. And this for the reason that this useful machine is the "silent partner" and practical appendage of the phonograph.

A good model among type-writers is that called the Smith Premier, for these reasons:

1. It gives perfect and permanent alignment.

2. Uniformity of stroke.

3. Locking at the end of line.

4. Convenient type cleaning.

5. Economical ribbon movement.

6. Removable platen on cylinder.

The Smith Type-writer is constructed at

Syracuse, where the plant for this purpose is larger than that of any other similar machine in the world. It is stated by the best authority that over ten thousand machines have been sold within the last two years. And it is a fact that a skilled operator has been able to write out upon it the old proverb, "Now is the time," etc. (so well known to operators), at the rate of one hundred and sixty words a minute.

In this instrument there are no wooden levers to warp and break. There is no difference in length—consequently no inequality in touch. The power is transmitted from key to type-bar by means of an ingenious steel rocking-shaft, giving an equal depression and leverage for every key. This renders it possible to arrange the keys in straight rows, does away with the "shift key," and allows a separate key for each type.

As with clocks and watches, so with typewriters—the public watches for improvements. When these come, they adopt them. This machine does phenomenal work and is equal to every emergency.

The Champion Type-writer of the World.

The champion type-writer of the world, who resides in Salt Lake City, was in Portland, Oregon, to take part in a type-writing contest in that city which took place on October 6th. A number of local stenographers expressed their intention to take part in the contest, not, however, with the hope of coming out victors. The champion first began the use of the type-writer twelve years ago, and attributes all his proficiency to constant attention to work and hard practice. His rapidity is largely due to the scientific manner in which he operates his machine. He understands the location of every key, and saves time by continuously reading his notes while operating. He does not even glance at the key-board, which is a knack acquired entirely by practice. He completely covers the key-board with his hand, and uses his fingers instead of his wrists.

This gentleman's first defeat was in a contest before the public in Cincinnati, in 1888, where he wrote ninety-seven words a minute. He was also defeated at the International Contest, given by the Canadian Short-hand Society, at Toronto. He subsequently beat all previous records at Chicago, averaging one hundred and eight and three fifths words per minute from dictation, excluding errors.

There are only two other operators in the country who approach this gentleman in swiftness and workmanship. There are many efficient stenographers in the West, but they are lost in the great mass. The number of stenographers have increased alarmingly in Portland, Oregon.

Employers are willing to pay a stenographer whose ability is unquestioned twice the salary that they would give an ordinary man.

Short-hand record-breakers, however, have lapsed into a state of innocuous desuetude. The Phonograph has taken the place in many instances of short-hand notes, and rapid transcription necessarily follows, as the eyes need not be taken from the key-board in order to read short-hand notes.

CALIFORNIA HEARD FROM.

Leo E. Alexander and Michael S. Alexander, composing the firm of Leo E. Alexander & Co., severally duly sworn, depose and say:

That they received an order from the Board of Education of San Francisco for Twenty (20) Smith Premier Type-writers. These machines are now being used in the Commercial High School—one of the public schools of this city, which is under supervision of the Board of Education.

The following is a copy of a letter received from Mr. W. N. Bush, Principal Commercial High School:

"The Twenty (20) Smith Premier Type-writers purchased of you some months ago have been thoroughly tested and are giving entire satisfaction. I believe, on account of its durability, type-cleaning device, and many necessary improvements, that it is, for all practical purposes, a perfect machine."

[SEAL] LEO E. ALEXANDER.

[SEAL] MICHAEL S. ALEXANDER.

Subscribed and sworn to before me }
this 3d day of June, 1891. }

E. M. MORGAN,
Notary Public.

SPEED A NECESSARY REQUISITE.

One of the first things to increase speed is to memorize word signs. The plan of following a slow-speaking dictator is very good. It is rather difficult to catch everything, but the student should not get discouraged. Stick-to-it-iveness is a very essential element in the gaining of speed. If the speaker is too fast, start with the sentence and try to get it all down. When you have finished one sentence pick up another. Don't attempt to write detached words, and always try to write complete sentences. If possible, try to follow the speaker mentally. If need be, write a sentence five hundred times. It seems rather discouraging to a student to do this, but the end justifies the means. If you practice a correct method and you are an easy learner, the art of type-writing will be quickly acquired. If you have fingers that are all thumbs, as the expression goes, and you strike the keys without any method, the practical results will amount to nothing. An earnest student with teachable hands ought to advance to a practical command of the machine in five weeks. We give good advice from an able contemporary, who says, "Purchase a good machine, learn its parts and possibilities, train the fingers properly, work—and the deed is done."

CORRESPONDENCE.

COLUMBIA PHONOGRAPH Co.,

Washington, D. C.

Editor PHONOGRAM:

We send you by this mail a simple device for securing a fixed point on the phonograph.

It is intended to be sprung upon the extreme left-hand end of the back-rod, thus preventing the diaphragm arm going entirely to the left, and is found to serve as a nice gauge for dictation purposes on the long cylinders. For short cylinders two should be used, placed side by side.

When shaving cylinders the device should, of course, be removed.

They can be supplied for ten cents each, or one dollar per dozen. This device fills a long-felt want, and will be warmly welcomed by the phonograph fraternity.

WESTERN PENNSYLVANIA PHONOGRAPH Co.,

Pittsburg, Pa.

"We take the liberty of suggesting an article manufactured in your city which every phonograph company should have, and which the writer had considerable difficulty in getting when he first heard that there was such a thing in existence. We refer to an acid-proof paint. We had a lot of carpeting spoiled by the acid leaking from the batteries, and to overcome this difficulty we used a japanned pan, made similar to a bread-pan, except as of such size to suit the storage battery, but the acid ate through the pans very readily, and at last we noticed that a paint company in New York made an acid-proof paint. We obtained some of it from them and used it with satisfactory results."

OHIO PHONOGRAPH Co.,

Cincinnati, Ohio.

We have recently received one of the special band cylinders for which the New England Phonograph Company are noted. The record is clear and distinct, and the music harmonizes perfectly. Mr. Andem, President of the Ohio Phonograph Company, who is himself a most excellent judge of this class of music, says, in writing to us of this company:

"We think the band music of the New England Phonograph Company unexcelled by any records we have listened to on the phonograph, and judging from the disposition of them in this

territory, we think our patrons must be of the same opinion. The records are very loud, clear and distinct, without showing the unpleasant effects which come from overvibration, which is oftentimes an objection to loud band records. This freedom from overvibration renders them well adapted for use either with the horn or with the ear-tubes, as there is an entire absence of harshness or squeaking."

NEW ENGLAND PHONOGRAPH Co.,

Boston, Mass.

"We desire to say that in the early part of the month we arranged with D. L. Slade & Co., the largest spice grinders in New England, to place a phonograph in their exhibit at the Health Food Exposition which opened at Mechanics' Hall on October 5th.

"We relate on cylinders the advantages of using their celebrated spices. The machine has been in charge of a boy, who has kept the cylinders constantly in order and the machine in operation; and the public has listened to the phonograph through fourteen-way hearing-tubes.

"This is an entirely new method of advertising in fairs, and has been very successful. We have in view some novel ideas with regard to advertisements which are now in course of materialization, and it is hoped will be carried into effect in the near future.

"We are selling as well as renting phonographs, and have made up to the present date a sale of one machine a day, finding that purchasers are not limited to original subscribers, but include outside parties."

CANADIAN PHONOGRAPH AGENTS,

Toronto, Canada.

"I notice in your last issue an account of a test of the Edison phonograph in connection with the telephone, in which the distance covered was thirty miles. It may interest you to know that Mr. Chris. Sparling, who has been operating an exhibition phonograph for us in various parts of Canada, recently called us up by telephone from the town of Orillia, which is eighty-seven miles from Toronto, and connecting his phonograph with the telephone, gave the vocal selection, 'They're After Me,' which was as distinctly heard by us as if we had had the ear-tips in our ears at Orillia."



Phono-Chat.

M. R. and H. C. Snyder have opened offices in the building of the Washington Loan & Trust Company, Washington, D. C., where transcribing from the phonograph will be a leading feature of a bureau of type-writing and stenography. The managers of this bureau thoroughly understand the problem with which they have to deal, being experts on the phonograph as well as in type-writing; and have promise of an exceedingly busy winter, sending to members of Congress and others for phonograph cylinders for transcription, returning the copy, etc. The telephone and the mimeograph are also a feature of the office.

The following is an extract from the circular of the bureau on the subject of the phonograph:

"We find the phonograph a valuable adjunct to our business. It stands always ready to take dictation as rapidly as the dictator can give it, and the cost of transcribing is only six cents per hundred words. For those who have phonographs at their own offices or residences we will send for and return the cylinders without extra charge. Reporters will find its use a great advantage, and it is also a time and labor-saving device to those who prepare a great deal of manuscript for the type-writer. We offer to let the machine 'speak for itself' at any time to those who desire to test its powers."

Messrs. Holland Bros., of Ottawa, Canada, received a phonogram cylinder which was subjected to twenty per cent. duty. They paid the duty under protest, because, Parliament being in session, the ministers were unable to devote any attention to outside matters.

Messrs. Holland made a vigorous protest against this class of mail being subjected to duty, but without avail, and they were obliged to let it stand over until after the session; but they intend to confer with the customs authorities very shortly and arrive at a definite conclusion as to whether phonogram cylinders which are sent through the mail as letters are subject to duty or not.

They think the department may be induced to take a reasonable view of the matter.

The Bryan Enholm Primary Battery Company, who are exploiting a new primary battery, have taken handsome offices in the Electrical Exchange Building, New York City. From present appearances their battery will become one of the features of the phonograph business.

The long-postponed suit of the New York Phonograph Company against George M. Rogers

was brought up in the City District Court of Trenton, N. J. The case was argued on its merits, and the court reserved decision.

Mr. T. Lewis, formerly with the New York Phonograph Company, now with the Edison United Phonograph Company, has gone to Cuba to introduce the phonograph in that territory.

The Edison General Electric Company has declared a quarterly dividend of two per cent., payable November 2d. Books closed October 12th, and reopen November 3d.

The New England Phonograph Company held its annual meeting on the 5th of October, at Gardiner, Maine. The old Board of Directors were unanimously elected. Mr. G. L. Rogers, of Gardiner, was elected clerk of the corporation and inspector of elections for the ensuing year.

At a subsequent meeting of the directors, held in New York, the old officers were elected—General A. P. Martin, President; Charles E. Powers, Treasurer; John H. Gleason, Secretary. The New England Phonograph Company report great success in the sale of phonographs in their section, and consider it has been a good thing for them.

The Electric Club is discussing rapid transit. Good. Enough of talking-dolls.

The Chesapeake and Ohio Railroad is experimenting with electric head-lights for its locomotives.

Will you kindly advise me as to whether you can furnish me with a copy of the "Life of Edison?" also as to the price of same?

If you can not furnish, would you kindly give me the address of parties who could?

Yours very truly,

A. J. HANSCOM.

Box 59.

Any first-class bookseller will gladly give you full information.—ED. PHONOGRAM.

NEW YORK PHONOGRAM COMPANY,
257 Fifth Avenue.

October 29th, 1891.

Editor of THE PHONOGRAM:

We are much pleased with the good work THE PHONOGRAM is accomplishing. The last two numbers have been especially valuable to the Phonograph interests generally, and every encouragement should be lent to the enterprise.

Yours very truly,

RICHARD TOWNLEY HAINES,

Secretary.

Authors and Publishers.

L'ELECTRICIEN.

This stanch devotee of science brings us its weekly freight of facts and figures and illustrations to impart knowledge of the most profound and hard-earned character to the American student. We look anxiously for its appearance, because its statements are correct and based upon the experiments and deductions of scholarly minds, and the material it offers the public is serious, solid, and filled with germs of thought which suggest further prosecution of the themes of which it treats.

The *Review of Reviews* comes to us bearing a treasure of three hundred and sixty-six pages of choice matter, literary, scientific, and critical. It is a Jupiter among periodicals, shining peerless and unrivaled because of its capacity to attract and secure pabulum for all sorts of minds; in other words, it possesses a grasp, a potentiality, amid the hosts of writers, artists, and those great spirits who do the world's intellectual work that Jove was said to hold among the heathen deities. Survey the vast field of literature this monthly includes, and note the discernment which prompts the presentation of the faces of Ary Scheffer and General von Moltke to those readers which the *Review* knows intuitively will appreciate them.

THE "REVUE SCIENTIFIQUE."

Paris, the great center of those gems of thought which scintillate in the brains of French writers, and finally rush forth like fiery fountains and are caught and transfixed by the more prosaic press of that reflective, calculating community, folds within her arms numerous valuable monthly and weekly reviews. The subjects therein treated take a wide range and describe new discoveries in every branch of learning, the current news, events and happenings of every race and clime. It is, therefore, an attractive messenger from those distant shores, and welcomed with sincere pleasure.

THE CANADIAN "ELECTRICAL NEWS."

This interesting periodical contains not only valuable information on electrical matters, but items useful to all readers. For instance: "A speaking-tube may be so arranged as to become a telephone;" and "Water may be heated as high as two hundred and twelve degrees Fahrenheit without passing into steam, but the slightest motion, even that of a footstep near, will convert it into steam." With regard to storage batteries, this journal says:

"The storage battery promised a month ago to run a street-car in Toronto has not yet materialized. Although the ownership of the fundamental patent of the storage battery has been awarded by the United States to C. F. Brush, this victory is a matter of small concern so long as its weight interferes with its merits. The corroding, sloppy electrolyte must be renounced and a permanent solid battery introduced. No rehash of the well-thumbed discovery of Faure will an-

swer. Let inventors work on new lines, and wealth and fame awaits the perfect battery." Speaking of the electric motor, the hydraulic and gas engine, this journal adds: "This will supersede the steam-engine, because there is no smoke, noise, or dirt; it requires no fire, is less costly, is not dangerous, is easy to repair, and can be run during the dry months."

The *Cosmopolitan Magazine* always takes one by surprise: it seems to possess some mysterious power of divining what its patrons do not know and what they would like to know, and putting together these facts; it gathers in with its all-embracing net from the great ocean of events and learning old and new material which is at once striking, novel and useful.

For instance, how many people in the great city of New York know what is meant by alfalfa farming? Who is there outside of Italy and the charmed circle of men of letters mostly resident in the old world that is aware of the duration or extent of crimes and suffering carried on within the walls of the Roman amphitheater? How many inhabitants of the United States (to say nothing of the rest of mankind) entertain clear ideas of the beauty of the city of Chicago, or the Titanic energy which that municipality has employed within the short term of its existence to construct a fixed and ample *point d'appui* for the immense trade which gravitates to that commanding position? Yet all this the *Cosmopolitan* paints for us with pen and pencil in the November number—and more.

It also cries aloud to its brethren of the press to be up and doing, so as to furnish literary nourishment of sufficient quantity and the best quality to all who demand it.

LE PHONOGRAM APPRÉCIÉ À PARIS.

"Un nouveau journal a fait son apparition en Amérique sous le titre de THE PHONOGRAM. C'est l'organe officiel, dit-il, des compagnies phonographiques des États-Unis. Il se publie à New York (salle 87, Pulitzer Building), depuis quelques mois; il contient beaucoup de renseignements intéressants. Il raconte, entre autres, que, tout récemment, le célèbre humoriste Mark Twain, n'ayant pu se rendre à New York pour écouter un discours sur la vie de sa belle-mère, un téléphone fut installé entre la chaire du prédicateur et le domicile de l'écrivain, à près de 900 kilomètres de distance, et de la sorte ce dernier ne perdit pas un mot de l'oraison."

If every periodical now published in the civilized world contained the same amount of literary and scientific matter pertinent to the cause it unfolds and elucidates, and at the same cost of publication as the *Electrical World*, what a vast fund of knowledge would be opened up to man at almost a nominal price.

Here we have the learning of centuries upon the subject of electricity exploited from the mines of the past and the laboratories of the present, and piled up into an immense mountain of erudition by Mr. Mottelay.

We have Thompson's, Houston's, Atkinson's and Ayrton's Lessons, Courses, Dictionaries, and Illustrated Lectures on Electrical Science, engineering, machinery, and systems, so that nothing is wanting to those who wish to learn.

The North American Phonograph Co.,

OWNERS OF THE PATENTS OF THOMAS A. EDISON

— FOR —

Recording, Perpetuating, and Reproducing Articulate
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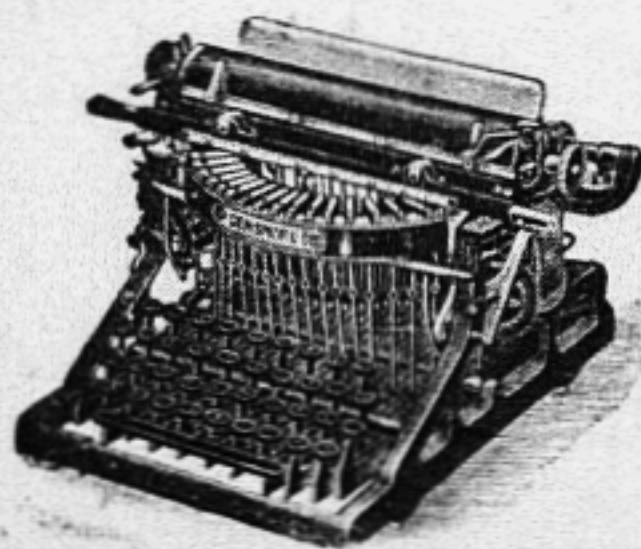
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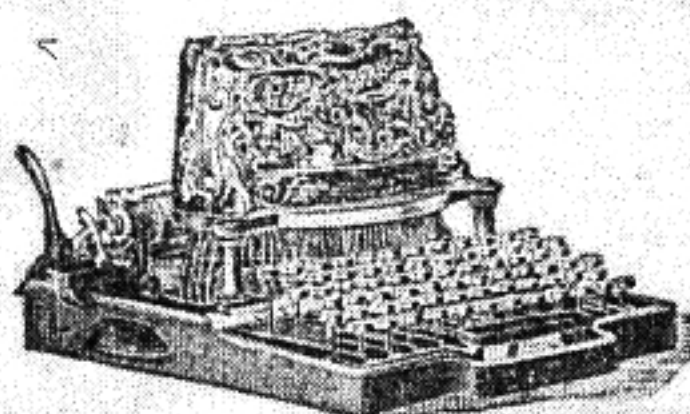
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